CHAPTER 5 BIDDING DOCUMENTS

5.1 RELATED STATUTORY AUTHORITY

A. SC Law Section 2-47-50 prohibits action of any sort or any expenditure that implements a Permanent Improvement Project (PIP) in any way until the Board has formally approved the project, except for advertising and interviewing for architectural and engineering services.

B. SC Law Section 6-7-830 requires the State to comply with local zoning ordinances.

C. SC Law Section 6-9-110 exempts the State from any county, municipal or local ordinance or regulation that requires the purchase or acquisition of a permit, license, or other device used to enforce any building standard.

D. SC Law Section 10-1-180 provides that all construction, improvement, and renovation of state buildings shall comply with all applicable standards as specified in the Manual for Planning and Execution of State Permanent Improvements. The State Engineer shall determine the enforcement of the aforementioned codes and referenced standards on state buildings.

E. SC Law Section 11-35-2720 permits the Chief Procurement Officers to prepare or review, issue, revise and maintain the specifications for supplies, services and construction required by the State.

F. SC Law Section 11-35-2730 requires that all specifications shall be written to assure cost effective procurement of the State's actual needs and shall not be unduly restrictive.

G. SC Law Section 11-35-2740 permits the Chief Procurement Officers to delegate in writing to a using agency the authority to prepare and utilize its own specifications. The specifications must assure maximum cost-effective procurements that are consistent with regulations promulgated by the Board.

H. SC Law Section 11-35-2750 requires that specifications prepared by architects and engineers shall be nonrestrictive and shall maximize the cost effectiveness of all procurements.

I. SC Law Section 11-35-3030 requires that all competitive sealed bidding for state construction contracts in excess of $100,000 be provided with bid security.

J. SC Law Section 11-35-3030 requires that when a state construction contract in excess of $100,000 is awarded, both a performance bond and labor and material payment bond be provided by the contractor.

K. SC Law Section 29-6-10 requires public agencies to have labor & material payment bonds for construction contracts in excess of $50,000.

L. SC Law Section 23-43-80 requires that all Modular Buildings be certified by the South Carolina Buildings Code Council and comply with The South Carolina Modular Buildings Construction Act.

M. SC Law Section 40-3-110 and Regulation 11-14 requires all construction documents to bear a seal of a licensed architect, when required to be prepared by a licensed architect.

N. SC Law Section 40-22-370 requires all construction documents bear a seal of a licensed engineer, when required to be prepared by a licensed engineer.

O. Governor's Executive Order No. 82-19 requires the State Engineer to assure compliance with the "State of South Carolina Building Standards in Floodplain Areas".

P. SC Law Section 23-45-145 requires a Fire Sprinkler System Specification Sheet to be completed for every fire sprinkler system to be installed in South Carolina.

5.2 RELATED OSE FORMS

The following OSE standard forms are referred to in this Chapter. Reproducible copies of these forms may be found in the Appendix indicated.

A. SE-271, *Schematic Design Documents Transmittal Form*, which may be found in Appendix A.

B. SE-273, *Design Development Documents Transmittal Form*, which may be found in Appendix A.

C. SE-275, *Construction Documents Transmittal Form*, which may be found in Appendix A.

D. SE-277, *Bid Documents Transmittal Form*, which may be found in Appendix A.

E. SE-290, *A/E Performance Evaluation*, which may be found in Appendix A.

F. SE-310, *Invitation for Construction Bids*, which may be found in Appendix B.

G. SE-311, *Request for Minor Construction Quotes*, which may be found in Appendix C.

H. SE-330, *Bid Form*, which may be found in Appendix B.

I. SE-370, *Notice of Intent to Award*, which may be found in Appendix C.

J. SE-390, *Notice to Proceed*, which may be found in Appendix C.

K. SE-480, *Construction Change Order*, which may be found in Appendix B.

L. SE-495, *Contractor/Subcontractor Performance Evaluation*, which may be found in Appendix C.

M. SE-900, *Application for a Permit to Develop in a Flood Hazard Area*, which may be found in Appendix C.

N. SE-901, *Permit to Develop in a Flood Hazard Area*, which may be found in Appendix C.

O. 00200-IDC, *Instructions to Bidders for Indefinite Delivery Contract–Construction*, which may be found in Appendix E.

P. 00201 – OSE, *Standard Supplemental Instructions to Bidders*, which may be found in Appendix B.

Q. 00501-OSE, *Standard Modifications to AIA 101-1997*, which may be found in Appendix B.

R. 00811 – OSE. *Standard Supplementary Conditions*, which may be found in Appendix B.

5.3 PERMANENT IMPROVEMENT PROJECTS – BOARD APPROVAL

A. No action(s), except for advertising, interviewing and negotiating for A/E services, or any sort of expenditure that implements a Permanent Improvement Project (PIP) shall take place until the Board has formally approved a project.

B. A project shall not be advertised for construction bids until the OSE has received an approved Form A-1 with a project budget equal to or greater than all elements of cost chargeable to the project.

C. Any change in the scope of the work of a project from an original A-1 shall first be approved by the Board on a revised A-1.

1. No work included in a new A-1 shall be started until that A-1 has been approved by the Board.

2. No work shall be incorporated into the project that is not within the scope of the A-1 as approved by the Board.

3. Do not change the name of the project from that which appears on the latest approved A-1.

5.4 PROJECT NAME AND NUMBER

A. The complete project name and number shall be shown on all project documents and correspondence.

B. If the project is a PIP, the project name and number shall be the same as that shown on the A-1 form.

C. If the project is a Non-PIP, the name should be that which is assigned by the Agency and the project number will be assigned by OSE.

D. For meanings of Project numbers assigned to PIPs and Non-PIPs see Chapter 1.

E. The Project Name assigned by the agency to Indefinite Delivery Contracts must distinguish between construction and A/E services.

5.5 APPLICABLE CODES AND STANDARDS

A. All state construction projects shall comply with the codes and standards, their published errata and other requirements listed in this Manual. If there is a conflict between the codes and standards, the more stringent requirement takes precedence. All sections are applicable unless noted otherwise.

B. The following Codes, as specified by the OSE in accordance with SC Law Section 10-1-180, are hereby adopted:

NOTE: Designers and agency reviewers should ensure that they have the latest errata to the International Codes. These are available from the ICC Web site:
http://www.intlcode.org/codes/errata.htm

1. International Building Code (IBC), 2003 Edition. The IBC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) Section 1612.3, Insert: "State of South Carolina"

(c) Section 1612.3, Insert: "latest published"

(d) Section 3410.2, Insert: " January 1, 2004"

(e) Omit Section 112, Board of Appeals

(f) The following Appendices are adopted:

(1) Appendix C – Group U – Agricultural Buildings
(2) Appendix E – Supplementary Accessibility Requirements
(3) Appendix F – Rodent Proofing
(4) Appendix G – Flood-Resistant Construction
(5) Appendix H – Signs
(6) Appendix I – Patio Covers
(7) Appendix J – Supplementary Accessibility Requirements for Qualified Historic Buildings and Facilities.

2. International Existing Building Code (IEBC), 2003 Edition. The IEBC is revised as follows:

(a) Section 101.1 Insert "State of South Carolina"

(b) Omit Section 112, Board of Appeals

(c) Section 1201.2, Insert January 1, 2004

(d) The following Appendices are adopted:

(1) Appendix A – Guidelines for the Seismic Retrofit of Existing Buildings
(2) Appendix B – SUPPLEMENTARY ACCESSIBILITY REQUIREMENTS FOR EXISTING BUILDINGS AND FACILITIES

3. International Fire Code (IFC), 2003 Edition. The IFC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) Omit Section 108, Board of Appeals

(c) The following Appendices are adopted:

(1) Appendix B – Fire Flow Requirements for Buildings
(2) Appendix C – Fire Hydrant Locations and Distribution
(3) Appendix D – Fire Apparatus Access Roads
(4) Appendix E – Hazard Categories
(5) Appendix F – Hazard Ranking
(6) Appendix G – Cryogenic Fluids – Weight and Volume Equivalents

4. International Energy Conservation Code (IECC), 2003 Edition . The IECC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) The IECC Appendix is hereby adopted.

5. International Fuel Gas Code (IFGC), 2003 Edition. The IFGC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) Omit Section 109, Means of Appeal

6. International Mechanical Code (IMC), 2003 Edition. The IMC is revised as follows:

(a) Section 101.1 Insert: "State of South Carolina"

(b) Omit Section 109, Means of Appeal

(c) Appendix A – COMBUSTION AIR OPENINGS AND CHIMNEY CONNECTOR PASS-THROUGHS, is adopted.

7. International Plumbing Code (IPC), 2003 Edition. The IPC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) Omit Section 109, Means of Appeal

(c) Section 305.6.1, Insert: "24" and insert "24"

(d) Section 904.1, Insert: "8"

(e) The following Appendices are adopted:

(1) Appendix B – Rates of Rainfall for Various Cities
(2) Appendix C – Gray Water Recycling Systems
(3) Appendix D – Degree-Day and Design Temperatures for Cities in the United States
(4) Appendix E – Sizing of Water Piping System
(5) Appendix F – Structural Safety
(6) Appendix G – Vacuum Drainage System

8. International Private Sewage Disposal Code (IPSDC), 2003 Edition. The IPSDC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) Omit Section 109, Means of Appeal

(c) The following Appendices are adopted:

(1) Appendix A – System Layout Illustrations
(2) Appendix B – Tables for Pressure Distribution Systems

9. International Property Maintenance Code (IPMC), 2003 Edition. The IPMC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) Omit Section 111, Means of Appeal

(c) Omit Section 109.6, Hearings.

10. International Residential Code for One-and Two-Family Dwellings (IRC), 2003 Edition. The IRC is revised as follows:

(a) Section R101.1. Insert: "State of South Carolina"

(b) Omit Section R112, Board of Appeals

11. International Urban -Wildland Interface Code. The IUWIC may be referred to for information on applicable situations, but does not supercede existing statutory requirements.

12. ICC Electrical Code (IEC), Administrative Provisions, ICC EC- 2003 Edition. The IEC is revised as follows:

(a) Section 101.1, Insert: "State of South Carolina"

(b) Omit Chapter 11, Means of Appeal

13. National Electrical Code, NFPA 70, 2002 Edition

14. National Electrical Safety Code, ANSI-C2-2002 Edition

15. Governor's Executive Order No. 82-19 (April 1982) - State of SC Building Standards in Floodplain Areas

C. The State Engineer is the authority having jurisdiction over state buildings, including construction in flood hazard areas, and shall determine the enforcement and interpretation of the above codes and standards. Agencies may appeal to the Director of the Office of General Services or his designee through the Office of State Engineer regarding the application of these codes to state buildings.

D. The following is a list of Other Codes, Regulations and Standards applicable at the time of the printing of this Manual. This list is not exhaustive, nor does it relieve the A/E of its obligation to comply with the requirements of other agencies, authorities or governmental bodies having jurisdiction over the project.

1. State Fire Marshal Regulations, 6/25/99 revision.

2. South Carolina Elevator Code & Regulations, latest edition, which references the American Society of Mechanical Engineers Safety Code for Elevators, Dumbwaiters, Escalators, and Moving Walks, and supplements thereto, ASME A17.1.

3. ASHRAE/IESNA 90.1- 2001, Energy Efficient Design of New Buildings except Low-Rise Residential Buildings.

4. State of SC Telephone Equipment Room and Communications/Data Systems Policies as formulated by the Chief Information Officer (CIO) Telecommunications.

E. For requirements concerning Fire Sprinkler Systems see Paragraph 5.13.

F. Codes that are applicable at the time of the first submittal should govern throughout the project, unless otherwise permitted by OSE. No project shall use a code that is older than one previous adopted edition.

G. Local building officials and inspectors shall coordinate their comments related to state buildings through the State Engineer and shall neither delay construction nor delay or deny water, sewer, power, other utilities or fire fighting services.

5.6 CODE COMPLIANCE INFORMATION ON DRAWINGS

A. The information in Tables 5.6-1 through 5.6-11 found at the end of this Chapter shall be on the cover sheet or the first sheet after the cover sheet. The Fire Marshal Fire Sprinkler Specification sheet, when applicable to the project, shall be located on the same drawing as the Code Compliance Information. On minor projects that are not code-intensive, the data required may be modified to fit the project, marked "N/A" or omitted, as approved by the OSE. For a project that is not new construction, see Paragraph 5.26.

B. A/E's shall provide, upon the request of OSE or the Agency, and as part of Basic Services, design calculations, studies and analyses as necessary to demonstrate compliance with the design codes, standards and regulations applicable to the specific Project.

5.7 CERTIFICATIONS ON DRAWINGS

A. The following certification applies to all projects and should be shown on the cover sheet:

ZONING CERTIFICATION

"I hereby certify that, to the best of my knowledge, these plans comply with applicable zoning ordinances, and that plans have been submitted to appropriate authority for their review and/or approval."

Architect/Engineer _____ Date _____

B. If the project does not require a National Pollution Discharge Elimination System (NPDES) permit from SCDHEC, include the following certification on the Site Plan(s):

EROSION AND SEDIMENT REDUCTION/STORMWATER MANAGEMENT

Designer's Certification:

"I hereby certify that the measures in this plan are designed to control erosion, retain sediment on the site, and manage stormwater in a manner that neither any on-site nor off-site damage or problem is caused or increased, that all structural measures are designed to the minimum standards for health and safety, and that all the provisions of the plan are in compliance with the Regulations contained in Chapter 72, Article 2, SC Code of Regulations (Erosion and Sediment Reduction and Stormwater Management Regulations)."

Signed:_____

Registered Professional Engineer or Registered Landscape Architect *(Circle one)*

Date:_____ SEAL(s)

5.8 DESIGN-RELATED CONSTRUCTION COORDINATION, PERMITS AND APPROVALS

A. The Agency, with the assistance of the A/E, is responsible for obtaining all design-related permits and approvals.

1. Contact the appropriate State and local authorities to obtain permit requirements.

2. The State is required by law to comply with local zoning ordinances as they affect the use and appearance of buildings.

3. When requested by the Agency or OSE the A/E shall provide a copy of the design documents to the local building official for review and comment. Any comments received shall be referred to the Agency and OSE for resolution. The A/E shall not incorporate requests from local officials until such requests have been approved by the OSE.

4. The A/E shall incorporate the final resolution of all comments and conditions into the Bid Documents.

5. Copies of design-related permits and approvals shall be provided to the OSE at the time of Bid Document submittal.

B. The Contractor is responsible for obtaining all construction-related permits and approvals.

1. The Contractor is required to obtain, at its own cost, all state and local business licenses.

2. The Contractor is required to obtain, at its own cost, general building and specialty inspection services as required by the Contract Documents. The Contractor shall be responsible for payment of any charges imposed for re-inspection.

NOTE: The General Contractor is not required to purchase building or specialty permits from the local building official for general construction, as state projects are exempt from this requirement. However, the local building official may elect to issue a complimentary building or specialty permit for the Project in order to track his agency's inspection services.

C. The A/E shall be responsible for coordination of site improvements affecting the traffic, access, utility, drainage, safety, and other conditions for public right-of-ways in accordance with the encroachment permit. This coordination should include the effects during and after completion of the construction.

D. Construction permits and approvals required by South Carolina state laws and regulations include, but are not limited to, those listed Table 5.8-1. Permits and approvals required by Federal laws and regulations have not been included in this schedule; however, the State must comply with requirements of Federal agencies (e.g., EPA, Corps of Engineers), whenever required by law.

5.9 YEAR 2000 COMPLIANCE FOR CONSTRUCTION CONTRACTS

A. The A/E shall specify that the construction deliverables (including, but not limited to, systems, products, equipment, components and materials) which are specified, listed or approved by the A/E for installation, lease or license pursuant to a contract with the State of South Carolina are "Year 2000 Compliant." For the purposes of the contract, a deliverable is "Year 2000 Compliant" if:

1. It will continue to function before, at and after the calendar year 2000 AD and, if applicable, with full ability to accurately and unambiguously process, display, compare, calculate, manipulate and otherwise use date information; and

2. The service or deliverable will operate during each such time period without error relating to date information, specifically including any error relating to, or the product of, date information which represents or references centuries or more than one century.

B. The A/E shall incorporate the requirements for Year 2000 compliance into all specifications and contracts prepared for or on the behalf of the State of South Carolina.

C. The Contractor shall include the Year 2000 Compliance Certification as set forth above in any and all of its subcontracts, purchase orders or contractual instruments for services or deliverables to be provided for the Work under this Contract.

5.10 HAZARDOUS MATERIALS

A. Prior to beginning construction on a renovation project the Agency shall test all materials suspected to be hazardous.

B. Hazardous materials shall include but are not limited to lead, asbestos, polychlorinated biphenyl (PCB), toxic materials, or any other material that is a danger to health, life safety, and the environment.

C. The use of hazardous materials on state projects is not permitted without prior approval from the Agency and the OSE whether or not such use is allowed by law.

5.11 FLOODPLAIN DEVELOPMENT

A. The "State of South Carolina Building Standards in Floodplain Areas" requires compliance with the criteria set forth in Sections 60.3 and 60.5 of Title 44, Code of Federal Regulations. (Copies of these sections are available from the State Coordinator's Office for the NFIP and from the OSE.)

NOTE: Flood hazard areas are those areas identified by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary Maps (FHBM) that are subject to inundation by a 100-year flood. (Any Zone A or Zone V is in a flood hazard area.)

B. Floodplain Permit Process

1. All plans for new construction, substantial improvement and other development in a flood hazard area (floodplain), regardless of the agency's construction certification, shall be submitted to the Office of State Engineer to obtain a Permit to Develop in a Flood Hazard Area.

2. A permit shall be obtained prior to advertising the project for bids.

(a) The application for a permit shall be made using Form SE-900, and should be submitted for review at the earliest possible stage of the project for OSE to determine compliance.

(b) In an A-zone, where no Base Flood Elevation has been determined, use the best available base flood elevation data from other sources. As a minimum, the lowest floor shall be elevated at least 3 feet above the highest adjacent grade.

3. Upon favorable review of the application, the OSE will issue a permit using Form SE-901. The permit will be valid for 1 year from date of issue. If construction on the project has begun, then construction permits issued will remain valid until completion.

C. Permit Requirements for "Substantial Improvement" to Existing Structures

1. Any modification to existing structures considered to be a "substantial improvement" shall fully comply with Federal and State floodplain regulations (44 CFR, Chapter 1). A "substantial improvement" is any reconstruction, rehabilitation, addition or other improvement whose cost equals or exceeds 50% of the market value of the structure prior to improvement.

2. Agencies shall not segment work within a building artificially so as to avoid meeting the definition of a "substantial improvement."

3. A State project will be considered "substantial" if the value of the proposed work, when combined with the value of other improvements to the structure whose construction contract award dates fall within the previous three years, exceeds 50% of the market value of the structure prior to the earliest of the applicable improvements.

4. To determine whether a State project in a floodplain is a "substantial improvement", the Agency shall submit, attached to its SE-900, a cost estimate of the proposed improvement versus the market value of the structure, along with the cost of other improvements whose construction contract award dates fall within the previous three years.

D. Floodplain Certifications:

The Agency shall submit to the OSE the following certifications for structures constructed in a floodplain:

1. No-Rise Certification (Required for development in a regulatory floodway). A registered professional engineer shall furnish certification and supporting technical data. No special forms are required. This certification, when required, shall be submitted to the OSE along with the SE-900.

2. Elevation Certification (Required for structures in an A-zone or V-zone). A registered land surveyor shall furnish this certification, using FEMA Form 81-31. This certification, when required, shall be submitted as soon as the lowest floor is completed. Any work done prior to submission of the certification shall be at the permit holder's risk.

3. Floodproofing Certification (required for non-residential floodproofed structures in an A-zone). A registered professional engineer or architect shall furnish this certification, using FEMA Form 81-65. This certification, when required, shall be submitted to the OSE along with the SE-900.

4. V-Zone Certification (required for structures in a V-zone). A registered professional engineer or architect shall furnish this certification, using the SC Department of Natural Resources form. This certification, when required, shall be submitted to the OSE with the SE-900.

E. Notification for Periodic Inspections

The Agency shall give the OSE a minimum of 7 days notice of the date of the following stages of construction for projects in flood hazard areas:

1. Prior to construction when the site is staked out;

2. After the fill is placed and compacted, but before foundations are placed for projects using fill to elevate a structure above the base flood elevation (BFE);

3. After the completion of the foundation, but before the construction of the lowest floor for elevated structures; and

4. When the project is ready for the Substantial Completion Inspection.

F. Permit Variance Procedures:

1. A variance permit may only be granted through action by the Floodplain Variance Board at the request of the State Engineer.

2. A request for a variance shall be sent in writing to the State Engineer and should contain the following information, as well as such additional information as may be required by the State Engineer:

(a) The particular floodplain management standard which prevents the proposed construction or improvement;

(b) The characteristics of the property or proposed structure which prevents compliance with the flood management standards;

(c) The minimum reduction of standards which would be necessary to permit the proposed construction or improvement;

(d) The particular hardship which would result if all standards were applied; and

(e) For Historic Structures, the determination that the proposed repair or rehabilitation of the historic structure will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

G. Obtaining Flood Maps and Forms

1. Flood maps can be obtained from FEMA at the following address:

FEMA Map Service Center
PO Box 1038
Jessup, MD 20794-1038
Telephone: (800) 358-9616
Fax Number: (800) 358-9620
Web site: http://store.msc.fema.gov/. Select the "MAP SEARCH" button.

2. Flood maps are available for review at the following locations:

State Coordinator's Office for the NFIP
2221 Devine Street, Suite 222
Columbia, SC 29205
(803) 734-9103

3. Flood maps for specific sites may be available for review at the local community planning, zoning or engineering office or at the local Natural Resources Conservation Service office.

4. Flood Maps can be viewed at the FEMA web site: http://store.msc.fema.gov/. Select the "Map Search" button.

H. Publications:

All publications and forms can be obtained at either of the following locations:

Federal Emergency Management Agency
PO Box 2012
Jessup, MD 20794-2012
Attn: Publications
Phone: (800) 480-2520

State Coordinator's Office for the NFIP
SC Department of Natural Resources
2221 Devine Street, Suite 222
Columbia, SC 29205
Phone: (803) 734-9103 Fax: (803) 734-9106

Web site: http://store.msc.fema.gov/. Select the "STORE" button.

5.12 DEMOLITION PROJECTS

A. See IBC Chapter 33 and Chapter 9 of this Manual.

B. If a renovation project involves the demolition of any load supporting structural member, the Agency must comply with the SCDHEC regulatory requirements for demolition. See Chapter 9 for more information.

5.13 FIRE PROTECTION IN STATE BUILDINGS

A. Fire Sprinkler Systems

1. All buildings under the jurisdiction of The Office of State Engineer shall meet or exceed the following minimum requirements as defined in OSE Standing Order 2, dated October 20, 2003. Designers should verify with OSE that the requirements stated herein are the most current.

(a) Fire sprinkler systems are required in all buildings containing either an Institutional or Residential Occupancy, as defined by the IBC. A sprinkler system providing full coverage of such buildings is recommended, but not required.

(b) The minimum occupancy hazard classification normally accepted for sprinkler systems design, installation and water supply is Ordinary Hazard Group I as defined in NFPA 13, current edition.

(1) EXCEPTION 1: Requests for consideration of the use of the Light Hazard (LH) occupancy hazard for particular projects instead of OH-1 standard may be submitted to the Office of State Engineer. These requests will be evaluated on a case by case basis.

(2) EXCEPTION 2: Single-family and two family dwellings my be designated Light Hazard (LH) in accordance with NFPA 13 and provided with a sprinkler system designed and installed in accordance with the requirements of NFPA 13D, provided that the system shall provide a minimum average floor density of 0.05 gpm/sqft and all sprinkler heads in the design area shall meet or exceed the same minimum flow and pressure criteria. All sprinkler heads used shall conform to the UL listing requirements issued on or after July 12, 2002.

(c) Piping shall be a minimum of Schedule 10 steel pipe for 2.5 inches NPS and larger. Schedule 40 is required for all pipe sizes below 2.5 inches.

(d) Piping shall be joined to the fittings by one of the following means: threaded joints; welded, roll grooved, or flanged ends. All fittings and installation requirements shall be in accordance with NFPA 13.

(e) Material and equipment used in fire sprinkler systems shall be UL-Listed for the application and installed in accordance with NFPA 13 and referenced standards.

(f) Quick Response sprinkler heads shall be provided in building areas as required by paragraph 903.3.2 of the International Fire Code (IFC), or in other special design cases as determined by the OSE, provided that a minimum design density of 0.15 gpm/sqft is achieved. It is the responsibility of the responsible design professional to provide engineering information acceptable to the OSE which is sufficient to document compliance with this paragraph.

(1) EXCEPTION 1: Quick Response-Extended Coverage sprinkler heads, not otherwise listed for OH-1 application may be used in dormitory rooms and other sleeping rooms, with the prior approval of the OSE, provided that the minimum design density of 0.15 gpm/sqft is achieved.

(2) EXCEPTION 2: System designers may petition the OSE to permit a design which exceeds OH-1 area per sprinkler limit of 130 sqft/head, provided the minimum design density of 0.15 gpm/sqft is achieved.

(g) Individual projects may warrant fire sprinkler design requirements that are more or less demanding than OH-1.

(1) Reasonably anticipated building uses, building construction, unusual or abnormal fuel loading or combustible characteristics, and the susceptibility for changes in those factors, will all be considered on a case by case basis in the evaluation of proposed fire sprinkler system.

(2) Designers may propose variations from the detailed requirements of the OSE Standing Order for Fire Sprinkler systems, IFC, and NFPA 13 for specific projects.

a. Variations may be approved by OSE on the basis of an affirmative determination that the alternative design is satisfactory and complies with the intent of the IFC and NFPA 13.

b. The proposer is responsible for providing information required by the OSE to support the review of the proposed alternative design.

(3) Fire sprinkler system designers may propose a performance-based design in accordance with the requirements of the International Code Council's Performance Code for Buildings and Facilities. Performance based proposals will be considered in accordance with the requirements of the Performance Code.

a. Performances-based designs may be approved by OSE on the basis of an affirmative determination that the proposed design will provide an acceptable level of fire safety performance when the facility is subjected to fires that could occur in the fire loads that may be presented in the facility during construction or alteration and through its intended life.

b. **It is the responsibility of the proposer of a performance-based design solution to provide the information required by the OSE to support its review of the proposed design solution.**

2. All projects that are required to have an automatic sprinkler system shall comply with the South Carolina Fire Protection Sprinkler System Act, which requires that:

(a) The bidding documents shall include the Fire Sprinkler System Specification Sheet, as approved and issued by the State Fire Marshal;

(b) The Fire Sprinkler System Specification Sheet shall be prepared, sealed, signed and dated by a South Carolina licensed professional engineer;

(c) The Specification Sheet must be attached to the sprinkler system shop drawings.

3. Additional information and requirements that concern the South Carolina Fire Protection Sprinkler System Act can be obtained from the following address:

Office of the State Fire Marshal
Division of Fire and Life Safety
141 Monticello Trail
Columbia, SC 29203 Telephone (803) 896-9800

B. Fire Retardant Treated Wood

1. The Office of State Engineer and the Insurance Reserve Fund have determined that the use of fire retardant wood (FRTW) in South Carolina state buildings represents an unacceptable risk of long-term deterioration and sudden structural failure, with the potential for loss of life and costly repairs to State buildings.

2. Fire retardant treated wood, regardless of treatment process, shall not be used in State buildings for **any purpose**.

5.14 BUILDING COMMUNICATIONS SYSTEMS

A. The Agency shall notify the Chief Information Officer (CIO) of all projects involving the repair, modification, or installation of building communications systems, including telephone equipment rooms at the following address:

CIO Telecommunications Division
4430 Broad River Road
Columbia, SC 29210
Telephone: (803) 898-8121
ATTN: Charles Seastrunk

NOTE: This notification should occur as early as possible in the project planning process to enhance coordination during design and construction and to minimize delays and rework.

B. The A/E shall coordinate its design work to ensure that the building communications systems conform to the requirements of the CIO Telecommunications Division. Evidence of this coordination shall be provided to the OSE as part of the Design Development review submittal.

5.15 INFORMATION TECHNOLOGY PROJECTS

A. All projects involving information technology (IT) shall be approved in the Schematic Design stage (Design Development for smaller project) by the Office of the State Chief Information Officer (State CIO). The Agency shall submit all IT plans for approval to the following address:

Office of the State CIO
1201 Main Street, Suite 820
Columbia, SC 29201 Telephone: 803-737-1900

B. Information technology (IT) projects include, but are not limited to, the following:

1. Computer - Data processing provided by CIO, other state agency or other entity (including Private)

2. Copying and Printing

3. Field Technologies including two-way and GPS Services
4. Internet/Intranet
5. Mainframe/Minicomputer
6. PC/RISC/LAN/DOS
7. Communication lines for energy management systems
8. Telecommunication including antenna transmission towers;
9. Video
10. Wide Area Network

C. Projects with IT budgets less than $25,000 need not submit plan stage reviews to the State CIO.

5.16 MODULAR BUILDINGS

A. Modular buildings are any building of closed construction, regardless of the type of construction or occupancy classification, other than a mobile or manufactured home, constructed off-site in accordance with the applicable codes, and transported to the point of use for installation or erection.

B. Modular buildings that are used by agencies shall comply with The South Carolina Modular Buildings Construction Act.

C. Modular buildings must be certified by the South Carolina Building Codes Council.

1. Certification is evidenced by a label, issued by the Council, attached to each modular building.

2. Certification labels can only be attached to a modular building by the manufacturer under the supervision of a Council-approved inspection agency.

3. An approved inspection agency is an agency approved by the Building Codes Council to provide plan review, inspections, approvals and labeling.

D. Installation of modular buildings is construction work under the jurisdiction of the OSE, and shall meet the same requirements as new construction. The codes cited in paragraph 5.5 of this Manual are applicable. Specific attention should be given to design of foundations (for seismic and wind loading).

E. Moving of state-owned modular buildings (regardless of age or condition) shall comply with Chapter 9.

5.17 ALTERNATES TO THE BASE BID

A. Alternates are changes in the project scope or use of alternate materials, methods of construction, systems or designs. They are bid concurrently with the Base Bid. Alternates maybe used to obtain bid prices on reasonable additional work that the Agency may desire to procure in the event a Base Bid is lower than estimated.

B. It is the responsibility of the Agency and the A/E to cooperate during the design process so that the Bidding Documents have a Base Bid scope of work that meets the Agency's programmatic and budgetary requirements. Bid Alternates should be viewed as optional enhancements to the project scope, not essential features.

C. Alternates are not to be used for the purpose of determining costs of scope changes or use of alternate materials, methods of construction, systems or designs that have no reasonable expectation of being selected and implemented.

D. The following items shall not be bid as alternates

1. Items of required Life Safety.

2. Items required for the project to comply with applicable codes, standards, laws and regulations.

E. The listing of Bid Alternates requires OSE approval.

5.18 DRAWING MEDIA AND SPECIAL REQUIREMENTS

A. The OSE does not provide nor does it require any specific drawing media, borders, title blocks, scales, or sizes. However, drawings submitted to the OSE for review should meet the following requirements:

1. Have a minimum font size of 1/8"; and

2. Should not exceed an overall paper size of 30" x 42". Drawings larger than this size should be submitted in half-sized sets.

B. Drawings that are incomplete, ambiguous or difficult to read will not be reviewed by the OSE.

C. The Agency may impose special graphics requirements on the A/E.

5.19 STANDARD CONTRACT DOCUMENTS

The State of South Carolina has several sets of standard contracts and bidding documents that shall be used by all agencies, depending on the method of project delivery and nature of the services required. OSE forms other than those listed are provided to assist agencies in the administration of these basic contracts.

A. Design-Bid-Build – Large Project

This method of project delivery requires separate contracts between the Agency and the A/E for full design and construction support services and between the Agency and the Contractor for construction services. The basic contract forms used are:

A/E Contract

- AIA B151-1997, *Abbreviated Form of Agreement Between Owner and Architect*.
- OSE's Article 12-*Other Conditions or Services – AIA B151-1997*.
- The Agency's Article 13 to reflect Agency-specific or project-specific requirements (optional, must be approved by OSE).

Construction Contract

- AIA A701 – 1997, *Instructions to Bidders*.
- 00201 – OSE, *Standard Supplemental Instructions to Bidders*
- The Agency's own 00201 of additional supplemental instructions (optional, must be approved by OSE).
- AIA A101–1997, *Standard Form of Agreement Between Owner and Contractor* (including the OSE Instructions for completion of the A101).
- 00501 – OSE, *Standard Modifications to AIA A101-1997.*
- AIA A201 – 1997, *General Conditions of the Contract for Construction*.
- 00811 – OSE, *Standard Supplementary Conditions*.
- The Agency's own supplementary conditions (optional, must be approved by OSE).

NOTE: Design-Bid-Build projects that include a Construction Manager-Advisor require other contract documents. Agencies contemplating the use of a CM-A must contact OSE before A/E selection to obtain appropriate guidance.

B. Design-Bid-Build – Small Purchase or Limited Scope Project

This method of project delivery requires a contract between the Agency and the A/E for limited design or construction support services in any amount, or for services costing less than $25,000, and a contract between the Agency and the Contractor for small purchase construction services. The basic contract forms used are:

A/E Contract	Construction Contract
• *A Letter Contract written by the Agency for each project. The format and description of services shall be approved by the State Engineer.*	• AIA A701 – 1997, *Instructions to Bidders*. • 00201 – OSE, *Standard Supplemental Instructions to Bidders* • The Agency's supplemental instructions (optional, must be approved by OSE). • *A letter Contract written by the Agency for each project. The format and description of services shall be approved by the State Engineer.*

C. Indefinite Delivery of Design or Construction Services

This method of project delivery requires a term contract between the Agency and the A/E for design or construction support services costing less than $100,000 per project, and a term contract between the Agency and the Contractor for construction services costing less than $150,000 per project. The scope of each project is established in Delivery Orders issued by the Agency. The basic contract forms used are:

A/E Contract	Construction Contract
• *A Contract written by the Agency for each project. The format and description of services shall be approved by the State Engineer.* • SE-640, *Professional Services Delivery Order*	• 00200 (IDC) – OSE, *Instructions to Bidders for Indefinite Delivery of Construction Services* • ***A Contract written by the Agency for each project. The format and description of services shall be approved by the State Engineer.*** • SE-680, *Construction Services Delivery Order*

D. Other Methods of Project Delivery

Other forms of construction contracts may be required to address special circumstances and requirements. Contract documents for these situations are developed on a case-by-case basis and agencies must allow additional time in the project schedule for this effort.

5.20 PROJECT MANUAL

This section describes the requirements for organizing and completing the OSE-mandated front end documents for the typical large construction project. The Project Manual should include the following in the order shown (see Appendix B). Exceptions to this format shall be approved by the OSE.

A. Table of Contents

1. Use the OSE formatted Table of Contents found in Appendix B.

2. Follow the instructions in *italics* to incorporate the technical specifications.

B. Form SE-310

All sections of the SE-310, pages 1 & 2, shall be completed with appropriate wording and boxes checked. Submit a separate copy of pages 1 and 2 with the Construction Documents submittal. DO NOT include page 2 in the Project Manual, even for review purposes. The SE-310 included in the bidding documents shall bear the State Engineer's signature unless the project is within Agency construction certification.

1. Form SE-310, Page 1

(a) Fill in the complete project name and number as determined in Chapter 1.

(b) Fill in the project location, e.g., city or county.

(c) Indicate the requirements for Bid Security.

(1) Bid Security is required for all competitive sealed bidding for construction contracts in excess of $50,000.

(2) The Agency may waive Bid Security, for projects under $50,000, with approval of the State Engineer. In these circumstances, the Agency shall submit a written statement with the SE-310 indicating how the best interests of the State are being protected.

(d) Indicate the requirements for Performance Bond and Labor and Materials Payment Bonds to be provided if a contract is awarded.

(1) A Performance Bond and a Labor and Material Payment Bond are required on all construction projects when the estimated cost for construction is $50,000 or greater.

(2) The Agency may waive bonding requirements for projects under $50,000, if the Agency has provided protection for the State. In these circumstances, the Agency shall submit a written statement with the SE-310 indicating how the best interests of the State are being protected.

(e) Indicate, by checking box, if the contractor will or will not be subject to a performance appraisal per Form SE-495. See Appendix H for instructions in the appraisal process.

(f) Indicate the project Estimated Construction Cost Range. The standard entries are:

< $100,000	$100,000-$500,000	$500,000-$2,000,000
$2,000,000-$5,000,000	$5,000,000-$10,000,000	$10,000,000-$20,000,000
> $20,000,000	$750,000 max IDC	

(g) Give a full description of the scope and requirements for the project, including Bid Alternates and any requirements that significantly affect the scope of work or the qualifications of the bidders or sub-bidders.

(h) Fill in the complete name, address, telephone number, fax number, and email of the A/E. If the project was designed in-house, fill in the agency's information.

(i) Indicate the plan rooms and cities where bidding documents are on file, where they may be obtained, and the amount of deposit, if required.

NOTE: The amount of the required deposit should approximate the actual cost of printing. Any deposit over $30 shall be refundable to all those returning the bidding documents, including subcontractors and suppliers, in good condition within 10 days after the bid opening.

(j) Indicate requirements for a Pre-Bid conference by checking the appropriate boxes. Fill in date, time and exact location.

NOTE: The OSE recommends a minimum of 14 calendar days from the date of advertisement to the date of any pre-bid conference.

(k) Fill in the complete name, address, telephone number, fax number and e-mail of the agency and the agency coordinator. The agency coordinator should be the person designated by the Agency to respond to questions and to provide information regarding this project.

(l) Fill in the Bid date, time and exact location for hand or mail delivery of bids. The "Mail Delivery" address must include the street address.

NOTE: The OSE recommends a minimum of 14 days from the date of any type of pre-bid conference to the date for receipt of bids. When there is no pre-bid conference, the OSE recommends a minimum of 21 days from the date of advertisement to the date of receipt of bids.

(m) Indicate if the project is estimated to be within Agency Construction Certification by checking the appropriate box.

2. Form SE-310, Page 2

(a) Fill in the project number and name the same as shown on page 1 of the SE-310.

(b) Fill in all Budget information.

(1) The Total Approved Project Funding is the total amount shown on the most recently approved A-1 form, or, for a Non-PIP, the budget established by the Agency for this project.

(2) The Agency Construction Budget for this Contract is an amount that represents the available funds allocated for this contract, including contingencies.

(3) The Final Estimated Construction Cost cannot be greater than the Agency's Construction Budget for this contract. This is the A/E's final estimate of the bid award amount, including all Bid Alternates, as approved by the Agency.

(c) Provide the requested project data.

(d) Indicate the A/E's submittal of plans to local authorities. This is a requirement of the OSE to support the construction inspection requirements, therefore, an explanation must be given if the submittal was not made. Include the name and telephone of the local authorities, whether or not a submittal was made.

(e) Fill in ALL Flood Hazard information.

NOTE: This is required regardless of whether or not the project is in a flood hazard area.

(f) Fill in all information regarding status of permits and approvals required for the project.

NOTE: Copies of all permits MUST be submitted to the OSE prior to bid advertisement.

(g) The Agency's Project Coordinator shall sign and date the form SE-310. Include the Coordinator's title.

C. AIA A701. The Agency may elect to omit an original document at its discretion, provided a replacement page is inserted with information stating where prospective bidders may view the document (i.e., the A/E's or Agency's offices).

D. 00201-OSE

1. Complete the indicated paragraphs in Article 9 with project information.

(a) Fill in Subparagraph 9.1 with the Project name, number and location.

(b) Fill in Subparagraph 9.2 with the name of the Agency, designated purchasing office, address of that office, agency representative, agency representative contact information and special documents required, if any, for the project. If no special documents are required, insert "NONE."

(c) Fill in Subparagraph 9.3 with the location of the posting of the Form SE-370, as determined by the Agency.

(d) Fill in Subparagraph 9.4 with only Other Special Conditions for this Work, such as listings of Agency's specific campus requirements, Federal Funding requirements, etc. OSE must approve these conditions prior to advertisement. If there are no special conditions, fill in "NONE".

(e) Modifications by insertion of additional (sub) paragraphs in this form are not permitted.

2. Upon request, OSE will provide suggested wording to be included in Article 9 for projects involving hazardous materials.

E. Form SE-330

1. Page BF-1

(a) BID SUBMITTED BY: No action by A/E or Agency, to be filled in by Bidder.

(b) BID SUBMITTED TO: Fill in the Agency name.

(c) FOR PROJECT: Fill in the complete project number and name.

(d) BID SECURITY, Item 2: No action by A/E or Agency, appropriate box to be checked by Bidder.

(e) ADDENDA, Item 4: No action by A/E or Agency, to be filled in by Bidder.

(f) Item 5: Fill in the blank for the period of time for acceptance of bid. Use numerals to indicate days. Normally insert "60".

(g) BASE BID WORK: Insert the Base Bid work description as it appears in the description of the project on the project Form SE-310 or Form SE-311. Omit any references to Bid Alternates and contractor qualifications.

(h) BASE BID: No action by Agency, to be filled in by Bidder.

2. Page BF-1A *(Delete page if no Bid Alternates or Unit Prices are included)*

(a) ALTERNATE BID WORK: Insert a description of each Bid Alternate. Describe each Alternate in sufficient detail here to clearly indicate the intent of the Alternate and the location in the construction drawings and project manual. The A/E shall not strike out "Add to" or "Deduct from" on Alternates, even if it is obvious. The Bidder shall determine the effect of the alternates on its Base Bid. See Section 5.17 of this Manual for more information on Bid Alternates.

(1) The request for more than four Alternates is discouraged by the OSE.
(2) Compose alternates to add scope to the project.

(b) UNIT PRICE WORK: The A/E may use these lines to request Unit Prices on items that involve a specific quantity in the Base Bid, and that quantity may need to be modified during construction. Unit price quotes may be for additional items which are not in the Base Bid Work or in Alternate Bid Work, but which are unique. Unit price requests are to be filled in with the No., Item, and Unit columns by the A/E. The Bidder is to fill in the Add and Deduct Columns with his quotes in numerals.

NOTE: Unit prices are not to be used to determine the low bidder, responsiveness or responsibility, unless otherwise stated in the Bidding Documents, i.e., for award of an Indefinite Delivery Contract.

3. Page BF-2, Listing of Subcontractors

(a) BASE BID WORK: The Agency, in consultation with the A/E, shall identify by specialty all subcontractors who are expected to perform work or render service to the prime contractor and whose subcontracts to the contractor are each expected to exceed 3% of the prime contractor's Base Bid.

NOTE: A subcontractor specialty shall not be listed if the work of that specialty is a subclassification included within the scope of the prime contractor's license. Refer to the provisions of §40-11-410 of the SC Code of Laws, as amended, for information.

(1) "Subcontractor" is as defined in the Form SE-330. Material suppliers, manufacturers and fabricators are not subcontractors and are not to be listed.
(2) In the event the Agency and A/E determine that no subcontractor listing is required on BF-2, the words "NO SUBCONTRACTOR LISTING REQUIRED" shall be included on this page below Subcontractor Specialty column.
(3) The Agency may list other subcontractor specialties, regardless of the expected value of their work, but only if the Agency determines that the work of that subcontractor is vital to the success of the project. The OSE strongly discourages this practice.

(b) ALTERNATE BID WORK: Fill in subcontractor listings for Alternate Bids only if the work of the alternate subcontractor specialty is estimated to be more than 3% of the Base Bid.

NOTE: The determination of which subcontractor specialties are listed in the Bid Form is not protestable by prospective bidders.

4. Page BF-3

(a) TIME OF CONTRACT PERFORMANCE

(1) DATE OF SUBSTANTIAL COMPLETION: Fill in number of calendar days allowed for construction. The Agency, in consultation with the A/E, shall determine the time allowed to reach substantial completion for the work. This time shall take into consideration the 5 days per month for adverse weather included in the contract time.

(2) DATE OF FINAL COMPLETION: Fill in number of calendar days allowed. The Agency, in consultation with the A/E, shall determine the time from Substantial Completion to Final Completion for the work. This time is normally 30 days.

(b) LIQUIDATED DAMAGES AND EARLY COMPLETION AWARD

(1) STEP ONE-LIQUIDATED DAMAGES: Fill in the dollar amount to be retained for each day the project is not substantially completed within the specified or adjusted contract time for Substantial Completion. Typical items to be considered for Step One-Liquidated Damages are those costs or expenses that the Agency would incur if the Agency is unable to have unimpeded occupancy or use of the project in the specified or adjusted contract time. Some examples of these are:

- Additional costs for agency personnel working on the project;
- For asbestos abatement projects, the cost of additional air monitoring paid by the Agency;
- For dormitory projects, rental and/or other costs incurred for temporary housing for students, or for loss of student generated revenue because students could not be accepted;
- Agency costs for displacement of departments or other agency functions delayed from occupying the facility, or other justified inconvenience to the Agency;
- Additional interest or other monetary expense charged against Agency funding; and
- Additional costs to the Agency generated by the A/E during the extended time, such as personnel directly involved with the project.

(2) STEP TWO-LIQUIDATED DAMAGES: Fill in the dollar amount to be retained for each day the project is not finally completed within the specified or adjusted contract time for Final Completion. Items to be considered for Step Two-Liquidated Damages are those costs or expenses that the Agency would incur should the contractor not Finally Complete the project in the specified or adjusted contract time.

(3) EARLY SUBSTANTIAL COMPLETION AWARD: Fill in amount for Early Substantial Completion Award. Typical items that may be considered for early substantial completion award are those revenues or other demonstrable benefits the Agency would gain should the contractor substantially complete the project before the specified contract time. This option should be used only with discretion and when the Agency has determined it will receive tangible benefits as a result of early completion. Normal projects would enter "0" on this line.

5. Page BF-4

No action required by the Agency or the A/E. To be completed by the Bidder.

F. Income Tax Credit for State Contractors Having Subcontracts with Minority Firms.

Insert the Income Tax Credit notification in each Project Manual (see Appendix B).

G. AIA A101

1. The Agency may elect to omit the original document at its discretion, provided a replacement page is inserted with information stating where prospective bidders may view the document (i.e., the A/E's or Agency's offices).

2. A/E shall insert 00501-OSE but shall not include the filled out A101 in the Bidding Documents unless originals of the A101 are used.

3. This document shall be completed in conformance with the "Instructions for Completion of STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR (AIA Document A101 – 1997 Edition)", which is found in Appendix B.

H. AIA A201

1. The Agency may elect to omit the original document at its discretion, provided a replacement page is inserted with information stating where prospective bidders may view the document (i.e., the A/E's or Agency's offices).

2. The Agency shall insert 00811-OSE completed as follows:

(a) Article 15.1 — fill in Project Number.

(b) Article 15.2 — fill in Project Name.

(c) Article 15.3 — fill in information as indicated for typical inspection requirements. Inspection requirements are discussed in detail in paragraph 5.27.

(1) Indicate which typical inspections are required for the Project.
(2) Insert the name and telephone number of the inspection entity(s) that will perform the required typical inspections.
(3) At the A/E's discretion, typical inspection requirements may be inserted in Section 01400 "Quality Assurance" of the technical specifications. If this approach is taken, insert in article 15.3 a statement referring the bidder to section 01400 for typical inspection requirements.

(d) Article 15.4 —list the cash allowances, if any. Indicate amount of each allowance and Project Manual specification section in which each is located. If none enter "NONE."

(e) Article 15.5 —fill in requirements for record drawings, if any. If none, enter "NONE."

(f) Article 15.6 —fill in requirements for shop drawings, if any. If none, enter "NONE."

(g) Article 15.7 —fill in requirements for temporary signage, on-site office, utilities, restrooms, etc. If none, enter "NONE."

(h) Article 15.8 —fill in additional requirements for project cleanup. If none, enter "NONE."

(i) Article 15.9 —list all attachments that modify the General Conditions, if any. If none, enter "NONE."

(1) Additional Agency-created Supplementary Conditions may be used with the prior approval of the OSE.
(2) Upon request, OSE will provide suggested wording to be included in the Supplementary Conditions for projects involving hazardous materials.

I. SE-480

J. Technical Specifications

1. Insert all technical specifications into the project manual.

2. Include in Section 01400 "Quality Assurance" all requirements for Special Inspections. Special Inspections are discussed in detail in paragraph 5.27 of this Manual.

5.21 SEALING BIDDING DOCUMENTS

A. The Construction Document submittal to the OSE shall be complete and in conformance with Section 106 of the IBC and the corresponding sections of the technical codes.

B. The Bidding Document submittal to the OSE shall be 100% complete for OSE review and ready for bidding and shall be signed and sealed as required by the State of South Carolina licensing laws. The signing of each index sheet shall be considered adequate for specifications.

C. Sealing Requirements for Architectural Designs

Bidding documents that are required to be prepared by a licensed architect shall be sealed in accordance with the South Carolina Architectural Licensing Law. Plans and specifications for the following buildings are exempt from the mandatory sealing of documents by registered architects:

1. A building which is to be used for farm purposes only;

2. A building less than three stories high and containing less than five thousand square feet of total floor area, except buildings of assembly, institutional, educational, or hazardous occupancies as defined by the International Building Code, regardless of area;

3. A detached single-family or two-family dwelling, as defined in Group R3 of the International Building Code, regardless of size, with each unit having a grade level exit and any sheds, storage buildings, and garages incidental thereto; and

4. Alterations to any buildings to which the registration law does not apply, if the alterations do not increase the areas and capacities beyond the limits of this law or affect the structural safety of the building.

D. Sealing Requirements for Engineering Designs

Bidding documents that are required to be prepared by a licensed engineer shall be sealed in accordance with the South Carolina Engineering Licensing Law. Plans and specifications for the following buildings are exempt from being prepared and sealed by registered professional engineers:

1. Farm buildings not designed or used for human occupancy;

2. Buildings and structures less than three stories high and less than five thousand square feet in area, except that buildings of assembly, institutional, educational, or hazardous occupancies as defined by the International Building Code, regardless of area, are not exempt from the provisions of the registration law;

3. Alterations to a building to which the registration law does not apply, provided the alterations do not result in a change which would otherwise place the building under the application of this law.

5.22 GENERAL REQUIREMENTS FOR SUBMITTAL OF DOCUMENTS TO OSE

A. The A/E shall submit two copies of the following documents to the OSE for review, unless otherwise requested.

1. Schematic Design documents and Estimate of Construction Cost, transmitted with the SE-271.

2. Design Development documents and revised Estimate of Construction Cost, transmitted with the SE-273.

3. Construction Documents and Final Estimate of Construction Cost, transmitted with the SE-275.

B. The A/E shall submit one record copy of the Bidding Documents, the A/E responses to any comments from the Construction Documents review, and the Final Estimate of Construction Cost signed by the Agency, transmitted with the SE-277.

C. The A/E's failure to provide properly completed review submittals and information will delay the project. Project documents shall be "properly completed" as described in Paragraph 5.24 before the OSE will review.

D. Document submittals to the Agency shall be coordinated directly between the A/E and the Agency.

5.23 OSE REVIEW AND APPROVAL

A. The OSE will review all construction documents, including all addenda, for all projects whose estimated cost exceeds the agency's Construction Certification.

B. The OSE will provide technical assistance to agencies in reviewing construction documents within the agency's Construction Certification.

C. The OSE performs a review of construction documents for general compliance with all codes enforced by the OSE. This does not relieve the Agency or the A/E of the responsibility for knowledge of and compliance with all codes and regulations enforced by the OSE and other governing authorities.

D. For scheduling purposes, the Agency and the A/E shall allocate the OSE a total of 45 days for review of "properly completed" schematic design, design development and sealed and signed bidding documents.

1. When a properly completed submittal is provided, the review time will commence from the date of receipt of the submittal by the OSE until the date the review is completed.

2. The OSE will provide written review comments to the Agency and the A/E upon completion of each stage of document review.

3. If the Agency allows, the A/E may continue to work on the project, at their own risk, during the OSE review periods. This does not relieve the A/E from complying with all OSE comments made during the review periods.

E. All submittals to the OSE shall be complete and final for the designated submittal. Evidence of the A/E's quality control efforts, including intra- and inter-discipline coordination, shall be provided to the OSE and to the agency upon request.

1. The preparers of the construction documents shall be identified on the drawings and in the specifications.

2. Each submittal shall include all information required in that submittal stage, all information required in any previous submittal stages and the A/E's written responses to previous OSE review comments.

3. An incomplete submittal may be reviewed informally, depending on OSE's workload.

4. A notification of "incomplete submittal" will be provided to the Agency and the A/E, giving notice that the submittal has been rejected and that any review performed by OSE does not apply to the OSE's allotted document review time.

5. The OSE may revoke any approval issued under the provisions of this Manual where the approval was based on any false statement or misrepresentation of fact in correspondence, plans, specifications or data.

5.24 SPECIFIC DESIGN STAGE SUBMITTAL REQUIREMENTS

To be "Properly Completed" design documents submitted in stages shall provide the following minimum level of information and project definition.

A. Schematic Design Documents Submittal

1. Project code criteria as contained in Paragraph 5.6 with specific emphasis on the information required by Tables 5.6-2, 5.6-3, 5.6-4 and 5.6-5.

2. Site plan showing the following:
(a) building location;
(b) property lines, easements, encroachments, set-backs;
(c) street(s);
(d) parking (including accessibility requirements for the disabled);
(e) existing contours;
(f) adjacent buildings, structures;
(g) existing exterior utilities and
(h) other items required to define the site.

3. Single line plans showing the following:
(a) room plans, corridor plans;
(b) elevations sufficient to describe building;
(c) mechanical and electrical equipment rooms;
(d) telephone closets;
(e) CIO dedicated telephone equipment rooms (when required);
(f) toilets with fixture layouts (including accessibility requirements for the disabled); and
(g) other facilities for the physically disabled incorporated within the building.

4. Single line floor plans with life safety items submitted as a separate plan, unless information can clearly be shown on a single floor plan. Life safety items include, but are not limited to the following:
(a) exits;
(b) exit access corridors;
(c) rated walls and floors with openings therein
(d) proposed exit and directional sign locations; and
(e) other rated components

5. Structural drawings as may be required to illustrate specific building design functions;

6. Estimate of Construction Cost prepared in accordance with Appendix F, with any proposed alternates listed separately; and

7. List of required permits and approvals.

B. Design Development Documents Submittal

1. Further developed project code compliance information as contained in Paragraph 5.6;

2. Developed site plan including the following:

(a) new and existing topographic features affecting or relating to the proposed work;
(b) locations of exterior utilities required for the project;
(c) Accessibility information such as entrances, walks, ramps, etc.;

3. Developed double line floor plans including the following:

(a) vertical shafts and chases;
(b) proposed finished floor elevations;
(c) foundation plan;
(d) floor and roof framing plans;
(e) typical wall sections;
(f) general scale layout of building data and communications equipment rooms showing space requirements, HVAC, and fire protection as required by CIO, along with documentation of the A/E's coordination of the project with CIO;
(g) location and approximate size of special equipment to be installed such as compressors, generators, transformers, electronic equipment racks, consoles, panels, switchboards and service equipment, distributing frames, hoists, cranes, etc.;
(h) electrical receptacle and communications systems outlets;
(i) general lighting fixture layout;
(j) equipment layouts of laboratories or other such spaces specific to the project;
(k) exterior elevations showing proposed floor-to-floor heights; and
(l) basic details of any unusual features of construction, etc.

4. Separate developed double line floor plans with life safety items including, but not limited to, the following:

(a) UL design numbers for each rated assembly detail shown on the drawings;
(b) UL system numbers for rated floor, ceiling and wall penetrations;
(c) rated walls shown on each discipline (mechanical, plumbing, electrical, acoustical, special lighting, etc.,) floor plan;
(d) fire alarm system components;
(e) emergency egress and exit lighting fixtures; and
(f) other rated components.

5. Functional layout of the following:

(a) mechanical, electrical and electronic features and any special equipment;
(b) plumbing and heating, including evaporative coolers;
(c) HVAC system developed as necessary to assure compatibility with building fire protection system and fire-rated assemblies;
(d) air conditioning units and vertical risers for sanitary and roof drain lines; and
(e) boiler rooms with auxiliary equipment;

6. Worksheets and all information demonstrating compliance with ASHRAE 90.1;

7. The Office of the State Fire Marshal's Fire Sprinkler Specification Sheet to be placed on the drawings with information provided as indicated on the form. Provide the form on the same drawing as Tables 5.6-1 through 5.6-11 found at the end of this Chapter.

8. Status of all required permits and approvals;

9. Project Manual consisting of front-end documents and outline specifications defining the divisions and sections to be used;

10. Revised Estimate of Construction Cost prepared in accordance with Appendix F; and

11. Written responses to previous OSE comments.

C. Construction Documents Submittal

1. Fully completed set of drawings with code compliance information as contained in Sections 5.6 and 5.7, including signing of all required certifications;

NOTE: Renovation projects should include life safety, egress, and phasing floor plan(s) if the building is to remain occupied during the construction. Indicate protection barriers, means of egress, temporary exit signs, and emergency lighting. Provide information for fire alarm systems, smoke control, and operation of sprinkler systems and fire protection devices, and dust and debris control when required for the project.

2. Project Manual with completed OSE front-end and full technical specifications.

3. SE-310, pages 1 and 2, ready for signature by the State Engineer, with permits and approvals attached to page 2; Status of any required permits and approvals that may not be final;

NOTE: The Agency or A/E may submit projects to the OSE for final review prior to obtaining all required permits and approvals; however, projects may not be approved for advertisement until copies of all required permits and approvals have been received by the OSE.

4. Rough draft of the A101, filled out in accordance with the OSE's Instructions in Appendix B;

5. The A/E's Final Estimate of Construction Cost prepared in accordance with Appendix F; and

6. Written responses to previous OSE comments.

7. The Agency shall provide the OSE and the A/E with its written approval of the Construction Documents and the approved revisions, and the Final Estimate of Construction Cost.

D. Bidding Documents Submittal

1. The A/E shall develop resolutions to all OSE and Agency comments on the Construction Documents submittal and present them to the OSE and the Agency.

2. Based on the OSE's review and approval of the A/E's resolution of all comments on the Construction Documents submittal, the A/E will proceed to prepare the Bidding Documents. The A/E shall provide the OSE with:

(a) a numbered copy of the final Bidding Documents, with all required Architectural And Engineering seals with signatures affixed, as printed and issued to prospective bidders, which incorporate the approved resolution of all previous review comments; and

(b) written responses to previous OSE comments.

5.25 AGENCY EVALUATION OF A/E PERFORMANCE

A. The Agency shall perform A/E performance evaluations for all projects where either the estimated construction cost exceeds $100,000 or the total A/E fee exceeds $25,000.

B. Evaluation instructions are located in Appendix H.

C. Evaluations are required, using Form SE-290, for the following three phases:

1. "A/E Performance Evaluation"-Design Development Phase

2. "A/E Performance Evaluation"-Construction Documents/Bid Phase.

3. "A/E Performance Evaluation"-Construction Administration Phase.

D. For projects not involving construction, the Agency shall use the most appropriate phase sheet.

5.26 RENOVATION PROJECTS

Under Section 3402 of the International Building Code all construction projects that are not new construction are identified as Renovation Projects. If a project involves more than one of the categories listed in Table 5.26-1, the more restrictive will apply.

Table 5.26-1. RENOVATION PROJECT CODE REQUIREMENTS		
If the Project involves:	**And if the Project costs:**	
	More than 50% of replacement value, then the Project is:	**Less than 50% of replacement value, then the Project is:**
A CHANGE IN OCCUPANCY	Required to meet all applicable codes in 5.5 for the entire building	Required to meet all applicable codes in 5.5 for the entire building
Agencies should carefully consider a Change in Occupancy project for the following reasons: • *Any occupancy change to an existing State-owned building requires that the building meet all applicable codes in 5.5* • *See IBC Section 3406, Chapter 8 of the International Existing Building Code, and Fire Marshal Regulations 71-8300.8.D.* • *A structural analysis is required for Change in Occupancy. See IBC 3410.4* • *Live load posting is required per IBC 1603.3 and IBC 1603.4*		
A PARTIAL CHANGE IN OCCUPANCY	Required to meet all applicable codes in 5.5 for the entire building.	Required to meet all applicable codes in 5.5 for that portion of building changing occupancy.
• *See IBC Sections 3403, 3406, Chapter 8 of the International Existing Building Code, and Fire Marshal Regulation 71-8300.8.D.* • *Any portion of a building changing occupancy requires that the building meet all applicable codes in 5.5 for that portion of the building provided that portion is separated from other occupancies in compliance with Table 302.3.2 of the IBC and other applicable sections.* • *Live load posting is required per IBC 1603.3 and IBC 1603.4*		
ALTERATIONS AND REPAIR	Required to meet all applicable codes in 5.5 for the entire building.	Required to meet all applicable codes in 5.5 for that portion of building being altered or repaired.
• *Alteration: See IBC Section 3403 and Fire Marshal Regulations 71-8300.8.A and B.* • *Repair: See IBC Section 3403 and Fire Marshal Regulations 71-8300.8. C.*		
ADDITION	Required to meet all applicable codes in 5.5 for the addition and existing building.	Required to meet all applicable codes in 5.5 for the addition. A firewall may be needed between the addition and existing building.
• *See IBC Section 3403 and Fire Marshal Regulation 71-8300.8.B*		
MOVE BUILDING	Required to meet all applicable codes in 5.5.	Required to meet all applicable codes in 5.5.
HISTORIC BUILDING	See IBC 3409. Some features of accessibility may be less than 100% compliant.	See IBC 3409. Some features of accessibility may be less than 100% compliant.

A. The Replacement Value of a building may be determined by the appraised market value, excluding land value and site improvements. If you are unsure of that value contact:

State Building and Property Services (803) 737-1940
Office of General Services FAX: (803) 737-0689
1201 Main Street, Suite 410
Columbia, South Carolina 29201

B. Historic Buildings

1. See IBC Section 3407 and Fire Marshal Regulations 71-8300.8. F.

2. The building should be listed on a national, state, or local historical register.

3. The Agency and/or the A/E may request a meeting with the OSE prior to or concurrently with the submittal of the Schematic Design phase documents to discuss proposed changes.

4. The A/E and Agency should present a plan of action for the project using one or more of the four distinct standards of treatment of historic properties—Preservation, Rehabilitation, Restoration or Reconstruction. *The Secretary of the Interior's Standards for the Treatment of Historic Properties* and *The Secretary of the Interior's Standards for Rehabilitation & Guidelines for Rehabilitating Historic Buildings* should be used in formulating the Agency's plan of action.

5. Requirements for the renovation of historic buildings will be determined by the OSE, in conjunction with other state agencies that may be concerned, during Schematic Design phase document review.

C. Move Existing Structure

1. See IBC Section 3408 and Chapter 9 of this Manual.

2. Structures moved into or within the jurisdiction of the OSE shall comply with the provisions of the IBC and this Manual as for new structures.

3. Structures shall be reinstalled, erected, and otherwise completed by qualified contractors meeting licensure and procurement code requirements of the State of South Carolina.

4. Structures moved out of the jurisdiction of the OSE shall comply with the provisions of Chapter 9 of this Manual and IBC Section 3303.

D. Alternative Methods of Compliance: The alternative methods of compliance apply to all categories of renovations shown in Table 5.26-1, provided the structure exists prior to January 1, 2004.

1. See IBC Section 3410 and Fire Marshal Regulations 71-8300.12.A and B.

2. The provisions of IBC 3410 are intended to maintain or increase the current degree of public safety, health and general welfare in renovations. Full compliance with Chapters 2 through 33 of the IBC is not necessary, except where compliance with other provisions of the IBC or this Manual is specifically required.

3. For compliance with the alternative methods, IBC Table 3410.7 must be completed. Any documentation, data, evidence used in completion of the table may be requested by the OSE.

4. Agencies, regardless of certification, are not delegated the authority to approve alternative methods of compliance. A/E's shall submit any proposed alternative method to the OSE for review and approval.

E. Seismic Requirements

1. The State Engineer's office shall determine the extent to which existing buildings are to be seismically rehabilitated based on the degree of renovations planned by the agency.

2. When renovations are planned, the selected A/E and agency shall consult with the OSE to determine if a preliminary seismic evaluation is required. This determination should be made before the agency concludes the fee negotiations with the selected A/E. When required by OSE, a structural engineer shall perform the preliminary seismic evaluation of the existing building or structure(s) and prepare a report.

3. The preliminary seismic evaluation shall be a Tier 1 evaluation in accordance with ASCE/SEI 31-03, Seismic Evaluation of Existing Buildings. Further evaluation beyond Tier 1 shall be done if required by Table 3-3 of ASCE/SEI 31 maybe considered an additional service. The evaluations shall be based on the following minimum requirements:

(a) The evaluation shall be based on a Life Safety (LS) level of performance except the evaluation of "Essential Facilities" shall be based on an Immediate Occupancy (IO) level of performance. "Essential Facilities" are listed in Category III, Table 1604.5 of the IBC.

(b) The preliminary evaluation shall include the complete examination of all available documents pertaining to the design and construction of the building and an "on-site" examination of the structural system(s) to verify the building was constructed in accordance with the documents.

(c) The preliminary evaluation shall assume a site profile (ASCE/SEI 31, paragraph 3.5.2.3.1) of Class "D" as a minimum unless sufficient data is available to classify the site into a lower site

class. A Class "E" or "F" profile shall be used where site data (probabilistic data based on the history of adjacent sites or actual site data) indicates a probable or actual Class "E" or "F" profile.

4. Potential deficiencies determined from the preliminary seismic evaluation shall be summarized in a report containing the following information as a minimum:

(a) Building Type (Use Table 2-2 of ASCE/SEI 31).

(b) Summary of deficiencies prioritized as to their importance to the performance of the structure during a seismic event.

(c) Written description of the recommended improvement for each deficiency.

(d) Estimated degree (in percentage) to which each improvement brings the structural system towards 100% compliance with the designated level of performance

(e) Estimated cost of each improvement.

(1) Total cost for each improvement.
(2) Cost per square foot of total building area requiring seismic improvements.

5. The A/E shall submit to the Agency and the OSE a copy of the preliminary seismic evaluation report at the Schematic Design phase. The OSE, in consultation with the Agency and A/E, will determine the extent to which seismic retrofitting shall be included in the renovation project.

F. Accessibility by the Physically Disabled

1. See IBC Section 3409.

2. If in the opinion of the A/E, the building does not provide compliance accessibility by the physically disabled due to technical unfeasibility, the A/E must provide, with the Schematic Design submittal: (a) a prioritized list of deficiencies; (b) the reasons supporting a finding of technical unfeasibility; and, (c) design options, (d) cost estimates.

3. The OSE, after reviewing the Schematic Design submittal, may consider "technical unfeasibility" as an acceptable rationale for less than full compliance.

5.27 INSPECTIONS OF CONSTRUCTION PROJECTS

A. GENERAL

1. Inspections are required on all construction projects to determine compliance with the applicable codes.

2. There are two types of inspections that may be required: Typical Inspections and Special Inspections.

3. These inspections are in addition to any general construction observation performed by the A/E or by Agency personnel.

4. The Agency is responsible for ensuring that the required inspection services are performed.

B. TYPICAL INSPECTIONS

1. Typical Inspections include, as applicable, those described in the following documents:

(a) Section 109 of the International Building Code.
(b) Section 107 of the International Mechanical Code.
(c) Section 107 of the International Plumbing Code.
(d) Section 107 of the International Fuel Gas Code.
(e) Chapter 7 of the International Electrical Code.

2. The A/E shall determine whether or not qualified local, county or municipal building inspectors are available to perform typical inspections.

3. Where inspection services by qualified inspectors are not available from the local authorities, the Agency shall determine what other approved and qualified private firm(s) will perform the typical inspections.

4. Inspectors shall be considered qualified only when certified by the Standard Building Code Congress International (SBCCI) for the discipline in which they are offering inspection services.

5. The A/E shall include in Section 00811-OSE of the bid documents the name and contact information of the inspecting entity(s). If the inspecting entity is a governmental authority, the bid documents shall require bidders to include in their bid the cost of the inspection permits.

6. If local governmental authorities are not available to provide the inspection services, the Agency shall retain a private firm to perform Typical Inspection services.

C. SPECIAL INSPECTIONS

1. Special Inspections may be required in addition to Typical Inspections. These inspections require special expertise to ensure compliance with approved construction documents and referenced standards.

2. Special Inspections of materials, installation, fabrication, erection or placement of components and connections, shall be performed as indicated in Section 1704 of the IBC, unless approved otherwise by the OSE.

3. The A/E shall determine which Special Inspections are required for the project, and shall submit to the OSE, as part of the design development submittal, a Statement of Special Inspections.

(a) The Statement of Special Inspections shall incorporate all inspections required for the project in accordance with Section 1704 of the IBC, unless specifically exempted by the OSE.

(b) The Statement shall be in the form of Table 5.27-1 and shall include:

(1) A complete list of materials and work requiring Special Inspections.
(2) A list of the approved individuals, agencies, or firms intended to be retained for conducting such inspections.
(3) Endorsement by signature of the A/E and of the Agency and approval of the OSE Project Manager.

(c) The Statement shall also include attachment(s) in the form of Table 5.27-2, which is a Schedule of Special Inspections to be performed.

4. The OSE may require other inspections where the scope of work is unusual.

5. The Agency shall retain the approved individuals, agencies or firms to perform all required Special Inspections.

6. The A/E shall include the Statement of Special Inspections and the Schedule of Special Inspections in Section 01400 "Quality Assurance" of the Project Manual.

TABLE 5.6-1. DESIGN CODES AND STANDARDS

PROJECT DESIGNED IN ACCORDANCE WITH: *(List only those that apply to the work of project)*

1. International Building Code, 2003 Edition.
2. International Existing Building Code, 2003 Edition.
3. International Energy Conservation Code, 2003Edition.
4. International Fire Code, 2003 Edition.
5. International Fuel Gas Code, 2003 Edition.
6. International Mechanical Code, 2003 Edition.
7. International Plumbing Code, 2003 Edition.
8. International Private Sewage Disposal Code, 2003 Edition.
9. International Property Maintenance Code, 2003 Edition.
10. International Residential Code, , For One-and Two-Family Dwellings, 2003 Edition .
11. International Urban-Wildland Interface Code, 2004 Edition (reference)
12. ICC Electrical Code, Administrative Provisions, Administrative Provisions, ICC EC- 2003 Edition.
13. National Electrical Code, NFPA 70, 2002 Edition
14. National Electrical Safety Code, ANSI-C2- 2002 Edition
15. State Fire Marshal Regulations, latest revision
16. South Carolina Elevator Code and Regulations, Latest Edition
17. ASHRAE/IESNA 90.1-, Energy Standard for Buildings except Low-Rise Residential Buildings 2001 Edition
18. ICC/ANSI-A117.1-1998, Accessible and Usable Buildings and Facilities
19. Governor's Executive Order No. 82-19 (April 1982) - State of SC Building Standards in Floodplain Areas
20. State of SC Telephone Equipment Room Policies as formulated by CIO Telecommunications

(List all other Codes, Regulations and Standards that are applicable to the project.)

Table 5.6-2. BASIC CODE REVIEW INFORMATION

1 Site Development

(All site information is required if project affects the site or if site information is necessary for design purposes. All floodplain information is required even if project does not affect site and is not in flood plain)

1.1 Total Area of Project Site (in acres):_____

A. Total Area of Project Site that will be Disturbed/Developed (in acres):_____

B. Municipality and/or County Where Project is Located:_____

C. Jurisdiction for:

(Provide the name of the applicable authority)

1. Site Work:_____

2. Fire Department:_____Project in Fire District? Yes No

3. Water:_____

4. Sewer:_____

5. Zoning:_____Land Use Zone: _____

1.2. Is Project in a Flood Plain? Yes No

A. Flood Map Information:_____Community No.:_____Panel No.:_____

B. Flood Zone:_____Base Flood Elevation (BFE):_____

C. Building Lowest Floor Elev.:_____*(If in flood zone complete Table - 5.6-2A)*

1.3. Is Project in Wetlands Area? Yes No

2 Occupancy *(per IBC Chapter 3)*

A. Occupancy Classification:_____Group:_____

If building is a mixed occupancy per IBC 302.3, indicate the additional occupancy groups present:

B. Additional Occupancy Classification(s)_____Group:_____

(Provide additional lines as needed for each occupancy group in the building)

3 Type of Construction *(per IBC Chapter 6):*

A. Construction Classification:_____

B. Is the building construction protected or unprotected?_____

C. Is the building construction of combustible or noncombustible materials?_____

D. Is the building provided with a fire protection sprinkler system?_____

4 General Building Design, Allowable Area, Height and Occupant Load

Provide, at a minimum, the information required by Tables 5.6-3, 5.6-4 and 5.6-5.

(The OSE may require the A/E to submit detailed calculations of the building area and height and of the building occupant load)

Table 5.6-2A. FLOOD LOADS *(provide as applicable)*

1 Elevation of Lowest Proposed Floor (A Zone):_____

2 Elevation of Dry Flood proofed Floor (A Zone; Non-Residential):_____

3 Elevation of the bottom of the Lowest Horizontal Structural Member of the lowest floor (V Zone):_____

Table 5.6-3: Building Area					
Floor or Level	**Square Footage (As Designed)**	**Square Footage as Allowed by IBC**			
	Total Design Area	**Without Increase** *(IBC Table 503)*	**Frontage Increase** *(IBC 506.2)*	**Sprinkler Increase** *(IBC 506.3)*	**Total Allowable Area** *(IBC 506.1)*
First					
Second					
Third					
Fourth					
Provide additional rows as needed for each floor in the building, including basements and mezzanines.					
Total Floor Area (Incl. all Increases)					

	Table 5.6-4: Building Height			
	As Designed		**As Allowed by IBC**	
	In Feet	**In Stories**	**In Feet**	**In Stories**
Without any Allowable Increase *(per IBC Table 503)*				
Allowable Height Increase *(per IBC 504.2)*				
Total Height including any Allowable Increase				

Table 5.6-5: BUILDING DESIGN OCCUPANT LOAD *(per IBC 1004)*					
	Column Identification:	**A**	**B**	**C**	**D**
Floor or Level	**Occupancy Type[1]**	**Occupancy Floor Area[2]** *(specify NSF or GSF)*	**Floor Area in SF/Occupant[3]** *(specify NSF or GSF)*	**Occupants on this floor for this Occupancy Type[4]**	**Design Occupant Load**
_____	***(1)***	***(2)***	***(3)***	***(4)***	
	Add additional rows as needed for each Occupancy Type on this floor				
	Subtotal Design Occupant Load for This Floor:				***(5)***
Add additional rows as needed for each floor(including any mezzanine)					
Total Building Design Occupant Load:					***(6)***

Footnotes:
[1] *Provide the name of the Occupancy Type using the left column of Table 1004.1.2 of the IBC*
[2.] *Design Area of this Occupancy on this floor in either Gross or Net square footage (include mezzanines)*
[3.] *Allowed Floor Areas in SF per Occupant per right column in Table 1004.1.2 of the IBC*
[4.] *Divide Column A by Column B for each Occupancy and enter the result, rounded up to the nearest whole person*
[5] *Subtotal all Column C values for this floor to yield the Floor Occupant Load, rounded up to the nearest whole person*
[6.] *Total Building Design Occupant Load (sum of all Column D values)*

Table 5.6-6: Fire Resistance Rating of Building Elements			
Building Element	**Rating As Designed** *(in hours)*	**Rating As Required** *(in hours)*	**Testing Agency & Design Number** *(UL, FM, etc)*
Structural Frame Including Columns, Girders and Trusses *(per IBC Table 601)*			
Bearing Walls, Exterior *(per IBC Table 601)*			
Bearing Walls, Interior *(per IBC Table 601)*			
Nonbearing Walls & Partitions, Exterior *(per IBC Table 602)*			
Nonbearing Walls & Partitions, Interior *(per IBC **Table 601 and** Section 602)*			
Floor Construction, Including Supporting Beams & Joists *(per IBC Table 601)*			
Roof Construction. Including Supporting Beams & Joists *(per IBC Table 601)*			
Fire Walls *(per IBC Section 705)*			
Fire Barriers *(per IBC Section 706)*			
Shaft Enclosures *(per IBC Section 707)*			
Fire Partitions *(per IBC Section 708)*			

Table 5.6-7: Other Fire Protection Requirements			
Item	**Yes**	**No**	**Comments**
Are Smoke Barriers Required? *(per IBC Sections 405, 407, 408 and 709)*			
Smoke Partitions Required? *(per IBC Section 710)*			
Protection of Penetrations Required? *(Per IBC Section 711)*			
Are Penetrations per U. L. Listing /Testing Authority?			
Opening Protectives Required? *(per section 715, Table 715.3)*			
Is Draftstopping Required? *(per IBC Section 717)*			
Is Fireblocking Required? *(per IBC Section 717)*			
Are Sprinklers Required? *(per IBC Section 903)*			
Are Standpipes Required? *(per IBC Section 905)*			
Is a Fire Alarm System Required? *(per IBC Section 907)*			
Is a Smoke Control System Required? *(per IBC Section 909)*			

Table 5.6-8: STRUCTURAL DESIGN INFORMATION *(per IBC Chapter 16)*

(Information may be shown on initial Structural Sheet of the drawings or on the Sheet with other Code information. List the floor design loads on the structural plans.)

1. Floor Live Load_____PSF *(List the F_{ll} for each different occupancy in the building)*

2. Roof Live Load ____PSF

3. Ground Snow Load ____PSF *(If load is greater than 10 psf, complete items below)*

- **A.** Flat Roof Snow Load, P_f P_f = _____
- **B.** Snow Exposure Load, C_e C_e = _____
- **C.** Snow Load Importance Factor, I_s I_s = _____
- **D.** Thermal Factor, C_t C_t = _____

4. Wind Loads

- **A.** Basic Wind Speed, V_{3S} V_{3S} = _____
- **B.** Wind Importance Factor, I_w I_w = _____
- **C.** Building Category _____
- **D.** Wind Exposure _____
- **E.** Internal Pressure Coefficient _____
- **F.** Component and Cladding Wind Pressure _____

5. Seismic Loads

- **A.** Seismic Importance Factor, I_E_____
  Seismic Use Group, _____
- **B.** Mapped Spectral Response Accelerations S_s and S_i S_s = _____ S_i= _____
- **C.** Site Class_____
- **D.** Spectral Response Coefficient S_{ds} and S_{di}:
  S_{ds} = _____ S_{di} = _____
- **E.** Seismic Design Category _____
- **F.** Basic Seismic Force Resisting System_____
- **G.** Design Base Shear_____
- **H.** Seismic Response Coefficient(s), C_s _____
- **I.** Response Modification Factor(s), R _____
- **J.** Analysis Procedure_____

6. Special Loads (when applicable) _____

Table 5.6-9: PLUMBING INFORMATION

1. Water System: No. Fixture Units:_____ Peak GPM:_____ Service Line Size:_____

2. Sanitary Sewer System Loading:___GPD

3. Service Line Size: _____ Slope:_____

4. Minimum Number of Plumbing Fixtures Required *(per IPC Section 403 & Table 403.1)*:

- **(a)** Water Closets: Req'd:_____Male:____Female:____Provided: Male:____Female:____
- **(b)** Lavatories: Req'd:_____Male:____Female:____Provided: Male:____Female:____
- **(c)** Drinking Fountains: Req'd:____ Provided:____
- **(d)** Unisex toilet *(per IPC 404.1.1)*: Req'd:____ Provided: ____
- **(e)** Other *(list)*_____Req'd:____ Provided: ____

NOTE: *The Occupant load for minimum required toilet facilities shall be the same as the Building Design Occupant Load indicated in Table 5.6-5, above.*

Table 5.6-10: MECHANICAL INFORMATION

1. Overall Thermal Transfer Value (OTTV):_____

2. Cooling Load:_____S.F./Ton

3. Heating Load:_____BTU/S.F.

4. Outside Air *(CFM/Person)*_____

5. Insulation R-value: Ext. Walls_____ Roof_____

6. Glass: U-Factor_____ SC_____ Window-to-Wall Ratio_____

Table 5.6-11: ELECTRICAL INFORMATION

1. Service Transformer: By Utility?_____ By Agency?_____

If by Agency: KVA:_____ Primary Voltage/Phase:_____

2. Provide the following service information:

Service Voltage/Phase: _____ Amperes:_____
Service Entrance Conductors Size: _____ Quantity per Phase:_____
Total Connected Load KVA: _____ Estimated Demand Factor:_____
Estimated Maximum Demand KVA: _____
Available Fault Current in Symmetrical Amperes: _____
Interrupting Capacity of Service Overcurrent Device: _____
Type of Grounding Electrode System(s) per NEC 250-C:_____
_____

3. Emergency Generator (if any): KVA_____ Voltage/Phase_____ Fuel_____

4. Exit/Emergency Lights Backup Power: Integral Battery_____ Generator_____

5. Emergency Egress Illumination, Minimum Footcandles:_____

6. Fire Alarm System: Manual_____ Automatic_____ Addressable?_____Class A or B?_____

7. Lightning Protection Provided?: Yes_____ No_____

8. Building Communications coordinated with CIO?*: Yes_____ Not Required_____

**Contact Chief Information Office for applicability, (803) 898-8121*

Table 5.8-1: DESIGN-RELATED CONSTRUCTION PERMITS/APPROVALS		
Type of Development	**SC Law or Reg.**	**Where to Obtain Permit/Approval**
Air pollutant discharge	48-1-100, R61-62.1	SCDHEC - Air Quality Control
Ambulatory surgical facilities	R61-91	SCDHEC - Health Facilities Construction
Asbestos abatement	R61-86.1	SCDHEC - Air Quality Control
Building construction, Zoning	6-7-830, 6-9-110	Local Authority
Community residential care facilities	R61-84	SCDHEC - Health Facilities Construction
Construction in critical coastal areas	48-39-10, 130, 190	SCDHEC - Ocean & Coastal Res. Mgmnt.
Construction in navigable waters	49-1-16	SCDHEC - Water Pollution Control
Dams and reservoirs	49-11-200, R72-1, 2, 3	SCDHEC - Water Pollution Control
Demolition of Real Property	R61-86.1	SCDHEC - Air Quality Control
Educational facilities (K through 12)	59-23-40	SC Department of Education - Office of District Facilities Management
Elevators	14-16-90	SC Department of Labor, Licensing & Regulation
Fire Protection Sprinkler	23-45	State Fire Marshal
Fire suppression systems	R19-300.7	State Fire Marshal
Floodplains, construction in	Exec. Order 82-19	Office of State Engineer
Food service establishments	R61-25	SCDHEC - Local County Health Dept.
Hazardous waste management	44-56-20, 60, R61-79	SCDHEC - Solid & Hazardous Waste Storage & Disposal
Historical building rehabilitation	R12-125, 126	Archives and History, Local Authority
Hospitals & infirmaries	R61-16	SCDHEC - Health Facilities Construction
Landfills, solid waste disposal	R61-70, 107.6	SCDHEC - Solid & Hazardous Waste
Road encroachment, local	57-7-60	Local County Authority
Road encroachment, state	57-5-1080	Local SCDOT Maintenance Office
Sanitary sewer; treatment & disposal	R61-56, 57	SCDHEC - Domestic Wastewater
Storm water discharge, erosion and sediment control	R61-9; R72-100-108	SCDHEC - Water Pollution Control; State Engineer; Local Authority
Swimming areas, natural public	R61-50	SCDHEC - Water Supply Construction
Swimming pools, public	R61-51	SCDHEC - Water Supply Construction
Underground storage tanks	R61-92	SCDHEC - Groundwater Protection
Waste discharge (sewage, industrial waste, etc.)	48-1-100, 110, R61-9	SCDHEC - Water Pollution Control
Water supply	44-55-40, R61-57, 58	SCDHEC - Water Supply Construction
Wells, Underground injection	R61-71, 87	SCDHEC - Groundwater Protection

Table 5.27-1: STATEMENT OF SPECIAL INSPECTIONS

Agency:_____

Project Name:_____ **Project Number:**_____

Architect/Engineer:_____

The following firms and/or individuals are designated to perform the Special Inspections of the material or work designated below. (*Ex: Foundations, Concrete, etc.)* The firms and/or individuals have the experience, qualifications, certifications and/or licenses required to perform the special inspections indicated.

Material/Work to be Inspected: _____

Firm/Individual Name:_____
Address:_____
_____

Material/Work to be Inspected: _____

Firm/Individual Name:_____
Address:_____
_____

Material/Work to be Inspected: _____

Firm/Individual Name:_____
Address:_____
_____

Material/Work to be Inspected: _____

Firm/Individual Name:_____
Address:_____
_____

Responsibilities of the special inspectors are indicated on the attached **Schedule of Special Inspections**. Discrepancies shall be brought to the immediate attention of the Contractor so that corrective action can be taken in a timely manner. Copies of all test reports and test data shall be obtained from the inspectors by the A/E on a timely basis.

_____	_____
(Print or Type Name of A/E Representative)	*(Print or Type Name of Agency Representative)*
_____ _____	_____ _____
(Signature) *(Date)*	*(Signature)* *(Date)*

OSE Project Manager Approval:_____ _____
(Signature) *(Date)*

Use additional sheets as required to suit the Project needs.

Table 5.27-2: SCHEDULE OF SPECIAL INSPECTIONS

Project Name:_____

Project Number:_____

Page _____of_____

Instructions
The Structural Engineer of Record shall determine the material and/or work on the project requiring Special Inspections. The Special Inspection requirements shall be based on Section 1704 of Chapter 17 of the 2003 International Building Code. Any deviations from the requirements of Section 1704 must be approved by the State Engineer's office. If Inspection is by "Other", the inspecting entity shall be identified.

EXAMPLE

MATERIALS	*TYPE OF INSPECTION*	*SPECIFICATION REFERENCE*	*INSPECTION BY:*		
			Architect	*Engineer*	*Other*
Concrete	*Inspection of Reinf. Steel Placement*	*Spec. 03200, Para. 3.02*		**X**	
Steel	*Inspection of High Strength Bolting*	*Spec. 05120, Para. 3.04*			**X**

MATERIALS	**TYPE OF INSPECTION**	**SPECIFICATION REFERENCE**	**INSPECTION BY:**		
			Architect	**Engineer**	**Other**

Note: Use Additional Sheets as Required to Suit Project Needs.

THIS PAGE INTENTIONALLY BLANK